

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

**PCT**

01 DEC 2004

To:

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## NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year)

28.09.2004

Applicant's or agent's file reference  
P-2002-017WO

### IMPORTANT NOTIFICATION

International application No.  
PCT/DK 03/00399

International filing date (day/month/year)  
16.06.2003

Priority date (day/month/year)  
12.07.2002

Applicant  
OTICON A/S et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international  
preliminary examining authority:



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## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P-2002-017WO		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)
International application No. PCT/DK 03/00399	International filing date (day/month/year) 16.06.2003	Priority date (day/month/year) 12.07.2002
International Patent Classification (IPC) or both national classification and IPC H04R25/00		
Applicant OTICON AS et al.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of    sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I    <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II   <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V   <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand  09.12.2003		Date of completion of this report  28.09.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Kunzelmann, C Telephone No. +49 89 2399-2834 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/DK 03/00399**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-4 as originally filed

**Claims, Numbers**

1-4 as originally filed

**Drawings, Sheets**

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/DK 03/00399

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	2-4
	No: Claims	1
Inventive step (IS)	Yes: Claims	2,4
	No: Claims	3
Industrial applicability (IA)	Yes: Claims	1-4
	No: Claims	

2. Citations and explanations

**see separate sheet**

**Concerning Section V:**

**1) STATE OF THE ART (Rule 64.1 PCT):**

**1.1** Reference is made to the following document:

D1: US-A-5 864 628 (POSEN MILES ET AL) 26 January 1999 (1999-01-26)

**2) NOVELTY (Article 33(2) PCT):**

- 2.1** Document D1 describes a hearing aid including a shell which encloses a microphone and a receiver, ie a speaker (see col 3, lines 61 - 67). The speaker is a "transducer" in the terminology of present claim 1. As can be seen from Figures 3 and 15 and the corresponding description, the connection between the speaker (16) and the shell (12) is assured by means a tube (22) which forms a "suspension" in the terminology used in present claim 1.. This tube also functions as a sound guide for directing sound between the transducer and the shell of the hearing aid (see col. 4, lines 1 - 21), ie the "external cabinet of an audio processing device" in the terminology used in present claim 1. Thus, document D1 describes a suspension means according to the generic term of present claim 1.
- 2.2** In the embodiment of Figure 15, the tube (22) is connected at its first end (the one carrying an ear wax barrier 24) to the shell (12) by means which are not specified. At its second end, the tube (22) is connected to the outlet of the transducer (receiver output port 20) by means of a connector (824) (see col. 6, lines 52 - 64).
- 2.3** In an intermediate part of the tube (22) in the length direction, the tube has a part (attenuator 924), which part has, in alternation in the length direction, a narrow part (the tip of the barb), a wide part (the circumferential edge of the barb holding the attenuator in place), and a narrow part (a cylindrical portion of the attenuator).
- 2.4** Document D1, therefore, discloses a suspension means for a transducer, having all the features mentioned in **claim 1**. Thus, the claimed suspension means is not novel (Article 33(2) PCT).
- 2.5.** In this context it is noted that the technical problem to be solved (suppression of

the transmission of casing vibrations to the transducer, see page 1, lines 14 - 19) is not solved by the mere provision of alternating wide and narrow parts in the tube, since such narrowing parts could even strengthen the tube and facilitate the transmission of vibrations. Thus, it seems that the feature of **claim 2** is actually the solution to the problem underlying the invention. Hence, it seems that the feature of claim 2 should be present in the independent claim already for clarity reasons (Article 6 PCT). Incidentally, the available state of the art does not appear to hint towards the subject-matter of such a clarified claim.

**3) INVENTIVE STEP (Article 33(3) PCT):**

- 3.1 The tube disclosed in document D1 has a circular cross-section. However, both the suspension function and the sound guide function can be performed equally well with a different, for instance oval cross-section. Thus, the suspension means of present **claim 3** is an arbitrary constructive modification of the suspension means of document D1 and does not appear to solve a technical problem.
- 3.2 As discussed in point 2.5 above, claim 4 should be dependent on a modified independent claim for clarity reasons. The available state of the art does not appear to hint towards the subject-matter of claim 4 when made dependent on such a clarified claim.